MS docket 150948.1; SLWK 777.400us1

ABSTRACT OF THE INVENTION

A programming-language construct called a program history, and a method, system, apparatus, and data structure for translating computer source code that contains the program history construct. A program history captures data regarding the state of the program as it executes and makes this data available to functions called history operators, which operate on the data. The source code contains a history operand, an instance of the history operand, and the history operator. The presence of the history operand directs a translator to cause history data to be saved regarding the sequence of data that is associated with the operand instance as the program executes. The presence of the history operator directs the translator to cause a function to be performed that saves history data. In this way, the programmer is freed from writing tedious and error-prone bookkeeping code that declares variables and saves history data into those declared variables.

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